Job Risk Analysis

Name(s) of Risk Team Members: J. Barry, P. Cirnigliaro, D. Wilson	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Vacuum System Work Job Number or Job Identifier: JRA 10-06	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Description: Replace ion pump in the AGS ring	Severity (C)	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
Training and Procedures List (optional): See Vacuum Group procedures Approved by: *E. Lessard* Date: 5/12/2006 Rev. #: 0	Likelihood (D)	Extremely Unlikely	Unlikely	Possible	Probable	Multiple

Stressors (if applicable, please list all):	Reason for Revision (if applicable):Yearly Update, and Different Job Analyzed	Comments:
None		

				Before Additional Controls						After Additional Controls					
Job Step / Task	Hazard	Control(s)	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	Control(s) Added to Reduce Risk	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	% Risk Reduction
Apply/ remove LOTO to vacuum electrical systems	Exposure to electrical shock and or flash hazard	Procedures, training, use of PPE as per NFPA-70E, use of locks and tagout devices.	N	2	2	5	3	60	Access to AGS is limited to authorized personnel. Major electrical system are LOTOed by the MCR and Maintenance Coordinator. Additional LOTOs are applied to group LOTO boxes by personnel working in the area. Additional LOTOs are placed on specific equipment under service by system experts.	N	2	2	5	2	40	33%
Work in the AGS ring	Radiation exposure	Work planning, use of time, distance and shielding to reduce exposure, ALARA review of high dose jobs, RWP, HP coverage as required.	N	2	2	2	2	16								
Equipment Setup Moving heavy equipment, ion pumps, in AGS.	Overexertion – injuries caused by excessive lifting, pushing, pulling, holding, or carrying of an object	Use of hand carts. Use of mechanical aids.	N	2	2	3	3	36	Ergonomics in Mechanical and Industrial Work training is now available online. This course is for individuals who work with tools and equipment in a benchtop setting and who perform mechanical and industrial-type operations work. Strongly recommended for individuals who have experienced pain or injury from work-related ergonomic factors.	N	2	2	3	2	24	25%

Equipment Setup (Slip on floor or wet surfaces in shop)	Falls on same level	Slip resistant footwear (e.g., steel toe sneakers), housekeeping rules, work planning	N	2	2	4	3	48	C-AD Housekeeping Policy and OPM 1.7, Supervisory Practice for Working with Hazards were enhanced to reinforce C-AD commitment to housekeeping practices. Supervisors were reminded to have their respective personnel read the OPM. In addition, C-AD Senior Management involvement in Tier I Inspections has focused on Building Manager responsibilities concerning housekeeping issues.	N	2	2	4	2	32	38%
Equipment Setup Climbing over magnets to inside catwalk.	Falls to lower level, such as falling from a ladder or over a railing	Fall protection for work above 4 feet, training, selecting the right ladder for the job, inspecting the ladder, climbing and descending the ladder properly, work planning.	N	2	2	4	2	32									
Use of hand tools	Sharp edges, flying chips.	PPE, training, maintenance of tools.	N	2	2	1	2	6									
Equipment Removal and installation of ion pumps on platform)	Bodily reaction – injuries resulting from bending, climbing, loss of balance and slipping without falling	Use of crane to eliminate manual material handling tasks, use of lifting fixtures, ergonomic reviews of work,, training, work planning. Use of leather glove and safety glasses to prevent injury.	N	2	2	3	3	36									
Turbo Vacuum Pump operation	Pressurized System (Vacuum)	Training, procedures, instrumentation, ventilated or open areas for exhaust, leak checks as you draw vacuum, PPE, venting paths if required	N	2	2	3	3	36									
Set up cleaning and leak check	Chemicals	PPE, CMS, training, procedures, limited amounts, labeling, proper containers.	N	2	2	2	3	24									
Returning set up to pressure after testing	Pressurized system (vacuum)	Training, procedures, PPE, Venting gas(nitrogen), instrumentation.	N	2	2	3	3	36									
Moving and using pressurized cylinders	Dropping, missile	Training, proper moving carts, PPE, proper regulators, proper storage	N	2	2	4	2	32									
Further Description of Controls Added to Reduce Risk:																	

*Risk:	0 to 20	21 to 40	41-60	61 to 80	81 or greater
	Negligible	Acceptable	Moderate	Substantial	Intolerable